

### Remarks

Claims 1-31, 36, 42-49, 51-57, and 71-93 are pending in the application. Claims 32-35, 37-41, 50, and 58-70 have been canceled. Claims 1, 4, 6-9, 20, 21, 27, 30, 31, 36, 42-45, 47-49, and 51-57 have been amended. New claims 71-93 have been added. The specification has been amended to correct minor errors. No new matter has been added by virtue of this amendment. Reconsideration of the application as amended is requested.

### Claims in the Case as a Result of the Restriction and Election of Species

In form PTOL-326 the Examiner states that claims 1-20 are pending in the application.

In the restriction, dated February 23, 2005, the Examiner identified six groups and 15 species including "group I claim 1-20, and 41-44," and "Embodiment 2: figure 2."

In the response to this restriction, applicant elected group I and the species of FIG. 2.

Applicant has canceled claim 41.

As to claim 42, applicant would respectfully ask the Examiner to consider that FIGS. 2a-c shows all its elements: reader 40 and remotely powered and remotely interrogated sensor transponder 48c. Sensor transponder 48c includes sensor 60, receiver coil 34', and signal conditioner to provide sensor data ratiometric with magnitude of excitation voltage. The signal conditioner includes amplifier 58, mux 56, and A/D converter 230.

Tap 66 and switched reactance 68 of claims 43 and 44 are also shown in FIGS. 2a-c

Thus, applicant would respectfully ask the Examiner to consider that claims 42-44 are covered by the species of FIGS. 2a-c and should also continue to be pending in the application. Applicant requests that claims 42-44 be included.

### Specification

The Examiner objects to the disclosure because the specification did not disclose the use of a digital sensor and circuit. The specification has been amended to add the digital sensor and circuit. The specification has also been amended to fix spelling errors.

### **Drawings**

The Examiner objects to the drawings under 37 CFR 1.83(a). The Examiner states that the drawings must show every feature of the invention specified in the claims. Therefore the 'circuit to detect changes in loading of said reader coil. . .' must be shown.

Applicant would respectfully ask the Examiner to consider that the circuits illustrated in FIGS. 9a, 10a, 11a, 12, and 13 show different embodiments of circuits for detecting loading of the reader coil, and these circuits are described on pages 28 to 32 of the specification. Therefore the objection under 37 CFR 1.83(a) has been traversed.

### **Claim Objections**

The Examiner objects to claims 4, 6, and 20 because of informalities. Claim 4 has been canceled.

The Examiner objects to claim 6, stating that "applicant is required to disclose the use of a circuit for detecting loading of the reader coil." Applicant would respectfully ask the Examiner to consider that the circuits illustrated in FIGS. 9a, 10a, 11a, 12, and 13 show different embodiments of circuits for detecting loading of the reader coil, and these circuits are described on pages 28 to 32 of the specification.

The Examiner objects to claim 20, stating that "applicant is required to disclose the use of a higher power to the sensor than is available from the coil." Applicant would respectfully ask the Examiner to consider that the circuits illustrated in FIG. 2c shows a circuit with energy storage 220 for detecting loading of the reader coil, and this circuit and use of this circuit to provide higher power to the sensor than is available from the coil is described on page 26 of the specification.

### **Claim Rejections—35 U.S.C. § 112 second paragraph**

The Examiner rejects claims 5 and 7 under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 5 and 7 have been amended to fix the problems cited by the Examiner.

### **Claim Rejections—35 U.S.C. § 103(a)**

The Examiner rejects claims 1-8 under 35 U.S.C. § 103(a), as being unpatentable over Tremblay in view of Carney. Claim 1, as amended, states:

1. An electronic system, comprising a reader and a remotely powered and remotely interrogated sensor transponder, said sensor transponder including:

a radiation receiving device connected for receiving power, wherein all power for operating said sensor transponder is derived from power radiated from said reader and received by said radiation receiving device;

a processor;

a sensor that can detect more than two values of a parameter;

a transmitting device, wherein said transmitting device is capable of transmitting data derived from said sensor to said reader; and

a data receiving device, wherein said data receiving device is connected for receiving digital data derived from said reader and for providing said digital data to said processor.

As amended, claim 1 is clearly distinguished from the teachings of Tremblay in view of Carney. Neither reference individually or in combination teaches or suggests providing a data receiving device within a remotely powered and remotely interrogated sensor transponder, "wherein said data receiving device is connected for receiving digital data derived from said reader and for providing said digital data to said processor." Both Tremblay and Carney have one way communication of data from transponder to reader. In Tremblay the data communication is exclusively from bio-sensor 10 to interrogator 15. In Carney the data communication is exclusively from RF tags to external reader. Therefore the rejection of claim 1 and claims dependent thereon, as being unpatentable over Tremblay in view of Carney under 35 U.S.C. § 103(a), has been traversed.

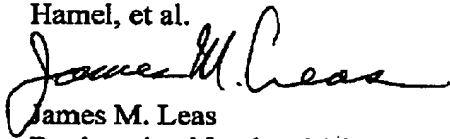
The Examiner rejects claims 9-20 under 35 U.S.C. § 103(a), as being unpatentable over Tremblay and Carney as applied to claim 1 above, and further in view of Townsend. However, applicant would respectfully ask the Examiner to consider that none of the references, either individually or in combination teach or suggest the limit of claim 1, as amended, a data receiving device within a remotely powered and remotely interrogated sensor transponder, wherein said data receiving device is connected for receiving digital data derived from said reader and for providing said digital data to said processor." Tremblay, Carney, and Townsend all have one way data communication from transponder to reader. Thus, the rejection of claims 9-20 as being unpatentable over Tremblay and Carney as applied to claim 1 above, and further in view of Townsend under 35 U.S.C. § 103(a), has been traversed.

### Conclusion

Applicant has reviewed the prior art of record and not relied upon and believes that the references are no more relevant than those cited by the Examiner. Applicant believes the claims are in condition for allowance. Reconsideration of the application as amended is requested. If there are any questions please call applicant's attorney at 802 864-1575.

Respectfully submitted,

For: Hamel, et al.

By:   
James M. Leas  
Registration Number 34,372  
Tel: (802) 864-1575

James M. Leas  
37 Butler Drive  
S. Burlington, Vermont 05403